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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,774	11/01/2000	Neil Jones	594-23292-US	2447

24923 7590 07/30/2003

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EXAMINER

MARTIR, LILYBETT

ART UNIT PAPER NUMBER

2855

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,774

Applicant(s)

JONES, NEIL

Examiner

Lilybett Martir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action and the recent submission of evidence that clarifies the co-ownership of Amb Patent 6,002,648 is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al. (Pat. 5,894,450) in view of Avedik et al. (Pat. 4,138,658).

- With respect to claim 1, Schmidt et al discloses a hydro dynamically efficient shaped body as in elements 22-26, a propulsion unit as in element 92 located in said body, and a control unit as in element 40 for directional control of said propulsion unit. Schmidt et al. doesn't disclose the specific utilization on his arrangement of a seismic device, even though he discloses the common use of hydrophones in seismic devices (Col. 2, lines 44-47). Avedick et al. teaches a marine seismic signal generating and detecting device that comprises a seismic device that is a seismic detector as in element 4 (See abstract) to be utilized in the

ocean. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the underwater arrangement of Schmidt et al. using the teachings of Avedick et al. by providing his arrangement with a seismic device to make said apparatus capable of making plural hydrophone/geophone measurements by utilizing plural means therefore rendering said arrangement more accurate and versatile when used in the art of seismic devices.

- With respect to claim 2, Schmidt et al. discloses a navigation unit for directing the control unit to a desired location in the ocean bottom (Col. 5, lines 6-8 and lines 28-35).
- With respect to claims 3 and 13, Schmidt et al. fails to disclose the utilization of a seismic sensor, even though he discloses the common use of hydrophones in seismic devices (Col. 2, lines 44-47). Avedick et al. teaches a marine seismic signal generating and detecting device that comprises a seismic device that is a seismic detector as in element 4 (See abstract) to be utilized in the ocean. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the underwater arrangement of Schmidt et al. using the teachings of Avedick et al. by providing his arrangement with a seismic device to make said apparatus capable of making plural hydrophone/geophone measurements by utilizing plural means therefore rendering said arrangement more accurate and versatile when used in the art of seismic devices.

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- With respect to claims 4 and 14, Schmidt et al. discloses a storage device for storing data sensed (Col. 6, lines 28-31). Schmidt et al. fails to disclose the utilization of a seismic sensor, even though he discloses the common use of hydrophones in seismic devices (Col. 2, lines 44-47). Avedick et al. teaches a marine seismic signal generating and detecting device that comprises a seismic device that is a seismic detector as in element 4 (See abstract) to be utilized in the ocean. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the underwater arrangement of Schmidt et al. using the teachings of Avedick et al. by providing his arrangement with a seismic device to make said apparatus capable of making plural hydrophone/geophone measurements by utilizing plural means therefore rendering said arrangement more accurate and versatile when used in the art of seismic devices.
- With respect to claim 5, Schmidt et al discloses a control unit 40 receiving navigation commands from a navigation system (Col. 5, lines 6-8 and lines 28-35).
- With respect to claims 6 and 16, Schmidt et al. discloses a control unit communicating an identifier code to the navigation system enabling the navigation system to determine location of the apparatus (Col. 5, lines 5-17).
- With respect to claims 7, 12, 15 and 17, Schmidt et al discloses a navigation system sending a responsive directional command to the

apparatus based on the current location and the desired location (Col. 5, lines 5-17 and lines 28-44), intrinsically receiving said command by means of element 108.

- With respect to claims 9 and 19, Schmidt et al teaches a flight control system for managing a plurality of said apparatuses during navigation (Col. 4, lines 52-55 and Col. 5, lines 5-8 and lines 28-35).
- With respect to claims 10 and 20, Schmidt et al discloses a flight control system being located on a surface support vessel (Col. 5, lines 52-54).
- With respect to claim 11, Schmidt et al. discloses placing a hydrodynamically efficient shaped body as in elements 22-26 into a fluid above an ocean bottom as shown in Figure 1, energizing a propulsion unit 92 located on said body by means of element 64, and receiving a command by means of element 108 in propulsion unit from a control unit (Col. 5, lines 28-44). Schmidt et al. fails to disclose the utilization of a seismic sensor, even though he discloses the common use of hydrophones in seismic devices (Col. 2, lines 44-47). Avedick et al. teaches a marine seismic signal generating and detecting device that comprises a seismic device that is a seismic detector as in element 4 (See abstract) to be utilized in the ocean. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the underwater arrangement of Schmidt et al. using the teachings of Avedick et al. by providing his arrangement with a seismic device to make said apparatus capable of making plural hydrophone/geophone

measurements by utilizing plural means therefore rendering said arrangement more accurate and versatile when used in the art of seismic devices.

- With respect to claims 8 and 18, Schmidt et al. fails to teach the utilization of the propulsion system acting to couple the apparatus to the ocean floor. Avedick teaches a marine seismic signal generating and detecting device that comprises a seismic device that is a seismic detector as in element 4 (See abstract) to be utilized in the ocean, where the apparatus that comprises said sensor is fixed to the bottom of the sea. One of ordinary skill in the art would have readily recognized the advantages and desirability of utilizing the propulsion systems of Schmidt et al. apparatus for merely and specifically coupling the apparatus to the ocean floor, since his teachings do disclose the use of said propulsion devices to propel their devices to pre-determined and chosen positions and therefore are capable of moving to any *pre-determined position*, which could be any, therefore including acting to couple the apparatus to the ocean floor. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the mobile underwater arrays system of Schmidt et al. or the marine seismic signal generating and seismograph device of Avedik et al. by coupling them to the ocean floor to detect any seismic information from a closer range as is necessary for the device to be capable of obtaining the seismological

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measurements (See Avedick et al., Col. 1, lines 8-12) therefore making the measurements made by said device more reliable and accurate.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 9:00 AM to 5:30 PM.

5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (703)305-4816. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

6. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Lilybett Martir
Examiner
Art Unit 2855

RLM
July 17, 2003



EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
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